ABSTRACT OF THE INVENTION

A multi-layered complementary wire structure and a manufacturing method thereof are disclosed, comprising a first wire and a second wire. Each of the first and the second wires comprises a main line and a plurality of branch lines located in a different layer from the main line. A plurality contact holes are formed in an insulating layer between the first wire and the second wire to connect the main line of the first wire and the branch lines of the first wire, and connect the main line of the second wire and the branch lines of the second wire. The main line of the first wire is insulated and crossed with the main line of the second wire. The main line of the first wire and the branch lines of the second wire are insulated with each other and located in the same layer. The main line of the second wire and the branch lines of the first wire are insulated with each other and located in the same layer.